Comparison of BMI, body fat percentage and lean body weight of national level teenage swimmers and non-swimmers in Sri Lanka

Dassanayake TDMSB, Rajaratne SA and Rajaratne AAJ

1 University of Colombo, Sri Lanka
2 University of Peradeniya, Sri Lanka

This study was conducted with the objective of assessing and comparison of Body Mass Index (BMI), body fat percentages and the lean body mass of national level female teenage swimmers and age and sex matched non athletic non swimmers in Sri Lanka. As the childhood obesity has become a worldwide health problem for which solutions are being searched for. 90 female teenage swimmers who qualified for the School Nationals Meet were recruited to the study and also similar numbers of age, sex and geographical area matched controls. BMI was calculated using the body weight and height while the body fat was analyzed using the seven site skin fold method. The lean body weight was calculated using the measured parameters. In our results, statistical significance was found in mean BMI scores (kg/m²) and Lean Body Weight (LBW) of female swimmers ($M_{BMI} = 19.03$, $SD = 1.47$ and $M_{LBW} = 42.03$, $SD = 3.74$) and non-swimmers ($M_{BMI} = 22.34$, $SD = 3.07$ and $M_{LBW} = 39.31$, $SD = 2.24$) with a p value 0.0001. Mean fat weight (FW) in kg and Fat percentage (Fat %) of female swimmers ($M_{FW} = 9.39$, $SD = 1.93$ and $M_{Fat\%} = 18.22$, $SD = 3.35$) and non-swimmers ($M_{FW} = 13.28$, $SD = 2.24$ and $M_{Fat\%} = 25.11$, $SD = 3.08$) were statistically significant with p values for FW 0.001 and for Fat % 0.0001 respectively. This concludes that fat deposition is higher in female non athletic non swimmers from their teen ages which may lead to complicated health problems in their later lives. Swimming has caused to keep fat weight at a lower level and lean body mass at a higher level and therefore swimming can be recommended for children to control their body fat.

Biography

Dassanayake TDMSB has completed his MPhil degree in Anthropometry and Exercise Science from 2012 to 2014 at University of Peradeniya. He is currently working as a senior Lecturer at Allied Health Sciences Unit, Faculty of Medicine, University of Colombo and the Coordinator of the clinical stream of the BSc physiotherapy degree program. He has published several research works being the initiatives of the Physiotherapy degree program in Sri Lanka. He serves as an Advisor to Physio BD magazine Bangladesh and editor of the Sri Lanka Association of Exercise and Sports Science.

suranga.dassanayake@gmail.com

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